Isambard Brunel (1769–1849) started work on a second Thames Tunnel. Even with the help of equipment not available to Trevithick, it took nearly twenty years to complete and was not opened until 1843 (Fig. 54).[3] In 1816 Trevithick anticipated the era of the export of British capital goods by embarking with a shipment of Cornish pumping engines for Peru. Ten years of wild adventures as engineer, prospector, soldier of the national liberation movement, and explorer in Peru, Chile and Costa Rica culminated in a hazardous crossing, on foot, of the Isthmus of Nicaragua. In 1827 he returned penniless to his native Cornwall, where he was received in triumph. One of his last and unrealized projects was to design a column to celebrate the passing of the Reform Bill in 1832. One thousand feet high—more than five times the height of the Nelson Column—it was to be 'a gilded conical cast-iron monument', 100 feet in diameter at the base and 12 feet at the top. It would weigh a mere 6,000 tons and its cost, he thought, would be less than £80,000. His roving imagination, his boundless belief in the ability of man's genius to overcome all obstacles and solve all problems, combined with an eduring sense of frustration and pessimism, made him as much part of the age of Byron and Shelley as James Watt's complacent certainty that all was well made him part of the age of reason.

The Railway Age may be said to have started with the opening of the Liverpool and Manchester Railway in 1830, the Steamship Age with the regular transatlantic service in 1838 from Bristol to New York, inaugurated by Kingdom Isambard Brunel's s.s. *Great Western*. What Trevithick, John Blenkinsop (1783–1831), Matthew Murray (1756–1826), George Stephenson and some of the other early engineers did for the steam locomotive, William Symington (1763–1831), Robert Fulton (1765–1815) and Henry Bell (1767–1830) did for the marine engine. Bell launched his steamboat *Comet* on the Clyde in 1811 and started a steam ferry service between Glasgow and Greenock in 1821. William Daniell sketched her in 1815 for inclusion in his *Voyage round Great Britain* (Fig. 48).

The design and manufacture of high-pressure engines and boilers for locomotives and ships and to drive machines of all kinds could only proceed if the design and manufacture of machine-tools kept pace with them. The result was that by 1830 most of the main types of machine-tool still in use to this day had been evolved by a brilliant generation of mechanical engineers. They included Henry Maudslay (1771–1831), Joseph Clement (1779–1844) and Joseph Bramah (1748–1814) of London, James Fox (1789–1859) of Derby, Matthew Murray of Leeds, and Richard Roberts (1789–1864) and Sir Joseph Whitworth (1805–87) of Manchester. James Nasmyth (1808–90), son of Alexander Nasmyth, the Edinburgh

S. Robert Powell, president of Carbondale Historical Society, is a familiar sight to visitors of Carbondale Memorial Park as he waters and cares for the dozen or so flower planters there. Although the park is directly across the street from Carbondale City Hall, the park was badly neglected and in need of repairs. However, that changed when the society and several veterans groups led by Jay Sara began a spruce-up campaign to restore the park's appearance. (Times Photo by Ron Ali)

Al Daugewelis is making for me two 8"x10" black & white glossy prints of the photograph from his original negative.

October 26, 1984

Robert -

Should I predecease you, would you read this Alfred, Lord Tennyson poem over my ashes as I am buried (where ?, Maplewood ?,I must get to work on that .) :

CROSSING THE BAR

1889

[This poem was written in Tennyson's eighty-first year, after a serious illness. He explained the Pilot as 'that Divine and Unseen Who is always guiding us.' A few days before his death he said, 'Mind you put Crossing the Bar at the end of all editions of my poems.']

SUNSET and evening star,
And one clear call for me!
And may there be no moaning of the bar,
When I put out to sea,

But such a tide as moving seems asleep,
Too full for sound and foam,
When that which drew from out the boundless deep
Turns again home.

Twilight and evening bell,
And after that the dark!
And may there be no sadness of farewell,
When I embark;

For tho' from out our bourne of Time and Place
The flood may bear me far,
I hope to see my Pilot face to face
When I have crossed the bar.

At the funeral of Sir Winston (Leonard Spencer) Churchill (1874 - 1965), as his body floated in state, on a barge, down the Thames River, Dwight Eisenhower read 'Crossing the Bar' as the world wept.

Thank you.

DWP

Robert Browning (1812 - 1889)

HOME-THOUGHTS FROM ABROAD

1845

1

Oh, to be in England,
Now that April's there,
And whoever wakes in England
Sees, some morning, unaware,
That the lowest boughs and the brush-wood sheaf
Round the elm-tree bole are in tiny leaf,
While the chaffinch sings on the orchard bough
In England—now!

2

And after April, when May follows,
And the white-throat builds, and all the swallows!
Hark, where my blossomed pear-tree in the hedge
Leans to the field and scatters on the clover
Blossoms and dewdrops—at the bent spray's edge—
That's the wise thrush; he sings each song twice over,
Lest you should think he never could recapture
The first fine careless rapture!
And though the fields look rough with hoary dew,
All will be gay when noontide wakes anew
The buttercups, the little children's dower
—Far brighter than this gaudy melon-flower!